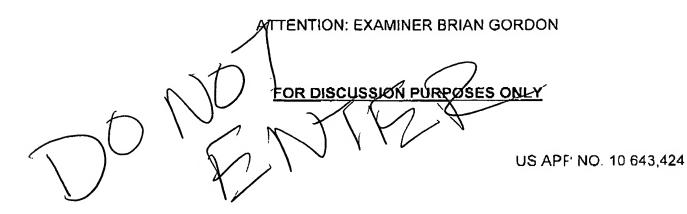
the substrate, and



3. (Currently Amended)

A device for conducting processing steps on a substrate comprising an array of chemical compounds on a surface thereof, sail device comprising:

a housing comprising a housing chamber configured to retain fluid forming a meniscus at an interface of said fluid with an atmosphere.

an opening in said housing adapted for insertion into said housing chaml er of

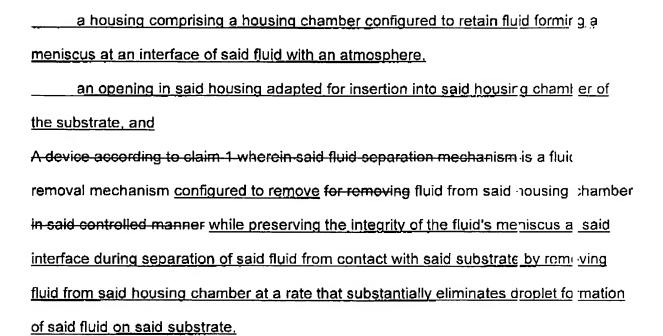
A device-according to claim-1 wherein said fluid-separation-mechanism-is a liftir g
mechanism adapted to lift for lifting said substrate out of contact with said fluid in-said
controlled-manner while preserving the integrity of the fluid's meniscus at said in terface

during separation of said fluid from contact with said substrate by lifting said substrate

out of said housing chamber at a rate that substantially eliminates droplet forms tion of

said fluid on said substrate. [NOTE DEFN OF ADAPTED TO ON PAGE 16]

5. (Currently Amended) A device for conducting processing steps on a substrate comprising an array of chemical compounds on a surface the reof, sa 1 device comprising:



- (Currently Amended) A device for conducting processing steps on a substrate comprising an array of chemical compounds on a surface thereof, sail device comprising:
- (a) a housing comprising a housing chamber configured to retain any fluid introduced into said housing chamber, said fluid having a meniscus at an interface of said fluid with an atmosphere,
- (b) an opening in said housing adapted for insertion into said housing chamber of a substrate having a surface comprising an array of chemical compounds, and
- (c) a fluid separation mechanism configured to separate fluid in said I ousing chamber from contact with said substrate in a controlled manner at a rate that preserves the integrity of the fluid's meniscus at said the atmosphere fluid interface, said rate

being a function of a surface tension characteristics of said fluid and a hydrophe bicity or
hydrophilicity characteristic of said surface of said substrate.
——————————————————————————————————————
(e) at least one outlet in-fluid communication with said housing chamt er.
A device for conducting processing steps, said device comprising:
a substrate comprising an array of chemical compounds on a surface the reof.
a housing comprising a housing chamber configured to retain fluid,
a fluid retained in said housing chamber and having a meniscus at an interface of
said fluid with an atmosphere,
an opening in said housing adapted for insertion into said housing chamber of
said,
(c) a fluid separation mechanism configured to separate fluid in said lousing
chamber from contact with said substrate in a controlled manner at a rate that a reserves
the integrity of the fluid's meniscus at said the atmosphere-fluid interface, said the
being a function of a surface tension characteristics of said fluid and a hydroph bicity or
hydrophilicity characteristic of said surface of said substrate.
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(e) at least one outlet in fluid-communication with said-housing chamber.
29. (Currently Amended) A method for performing a step of a hybridization
reaction on the surface of a substrate, said method comprising:
(a) inserting a substrate comprising an array of chemical compounds on a

surface thereof into a housing chamber of a device according to claim 1,

- (b) introducing a fluid reagent for performing said step into said housing chamber, and
- (c) removing said fluid reagent from contact with said substrate in a controlled manner at a rate that substantially eliminates formation of droplets of said fluid on said surface of said substrate.

A method for performing a step of a hybridization reaction on the surface of a substrate, said method comprising:

inserting a substrate comprising an array of chemical compounds on a surface thereof into a housing chamber of a flow device,

introducing a fluid reagent for performing said step into said housing chamber, and

removing said fluid reagent from contact with said substrate while preserving the integrity of a meniscus of the fluid reagent during separation of said fluid reager t from contact with said substrate, to substantially eliminate formation of droplets of said fluid reagent on said surface of said substrate.

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